

## WHAT IS CLAIMED IS:

1. A splice module for optically interconnecting ends of first and second optical fibers, each of which has a predetermined radius, the splice  
5 module comprising:
  - a first plate having a surface, in which at least one groove is formed, the groove extending in a predetermined direction; and
  - a second plate having a surface, which is arranged on the surface of the first plate to define a passage way for receiving and aligning the ends of  
10 the first and the second optical fibers, wherein the passage way has in a plane perpendicular to the predetermined direction an inscribed circle, which has a radius larger than the predetermined radius by a predetermined difference of 1.0  $\mu\text{m}$  or less.
2. The splice module according to claim 1, wherein the  
15 predetermined difference is a size between 0.5  $\mu\text{m}$  and 1.0  $\mu\text{m}$ , both inclusive.
3. The splice module according to claim 1, wherein the groove has a V-shaped cross section.
4. The splice module according to claim 1, wherein the passage  
20 way has a closed cross section in the plane perpendicular to the predetermined direction.
5. The splice module according to claim 1, wherein the first and the second plates have particular hardness equal to or higher than that of silicon.
- 25 6. The splice module according to claim 5, wherein the first and the second plates are made of silicon.
7. The splice module according to claim 1, wherein the groove has a cross-sectional shape obtainable by an etching process.

8. The splice module according to claim 1, further comprising a main member and a pressing lid, wherein: the main member has a mounting portion for mounting the first plate and projections; the pressing lid is formed with recesses, which engage with and are fitted with the projections while the first and the second plates are caught and fixed  
5 between the main member and the pressing lid.

9. The splice module according to claim 8, wherein:  
the main member comprises a pair of frame portions and a base portion;  
10 each of the frame portions extends in a first direction as the predetermined direction and is arranged apart from the other frame portion in a second direction perpendicular to the first direction, wherein the projections are provided for the frame portions and project between the frame portions;  
15 the base portion connects between the frame portions in the second direction and is provided with the mounting portion;  
the pressing lid has a top plate portion and sidewall portions;  
the top plate portion has opposite ends in the second direction; and  
the sidewall portions project from the opposite ends of the top plate  
20 portion towards the base portion in a third direction perpendicular to the first and the second directions, wherein the sidewalls have outside surfaces, respectively, and the recesses are formed in the outside surfaces of the sidewalls.

10. The splice module according to claim 9, wherein the outside  
25 surfaces of the sidewalls are in contact with the respective frame portions while the projections engage with the recesses.

11. The splice module according to claim 10, wherein:  
the top plate portion is formed with an opening and is provided with

a beam portion;

the beam portion extends over the opening in the second direction and projects beyond the top plate portion towards the base portion in the third direction;

- 5 the base portion is formed with two standing-up portions, which are arranged away from each other in the second direction and project from the base portion towards the top plate portion in the third direction, wherein the standing-up portions are brought into contact with the beam portion while the first and the second plates are placed and fixed between the beam
- 10 portion and the base portion.